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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/652,730	08/31/2000	William B. Boyle	K35A0665	3613
26332	7590	08/31/2005	EXAMINER	
WESTERN DIGITAL CORP. 20511 LAKE FOREST DRIVE C205 - INTELLECTUAL PROPERTY DEPARTMENT LAKE FOREST, CA 92630			ONUAKU, CHRISTOPHER O	
			ART UNIT	PAPER NUMBER
			2616	

DATE MAILED: 08/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/652,730	BOYLE ET AL.	
	Examiner Christopher O. Onuaku	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 08 June 2004.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-19 and 21-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-19&21-30 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All
  - b) Some \*
  - c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.

- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 6/8/04 have been fully considered but they are not persuasive.

Applicant inadvertently agreed with examiner Boccio during the interview of 5/11/04 and argues that the rejection applied to claim 1 is deficient since the combination applied fails to show or suggest control from the recorder controlling the set-top box and fails to disclose the EPG in the recorder.

In response, Schein clearly discloses a system that includes a processor (see, for example, processor 16 of Fig.1) for processing externally received program guide (e.g., television schedule). This processor is included in a computer system. The computer system (computer 12 of Fig.1) can be located within a set-top box (e.g., a DSS box) (see col.4, lines 41-65). The system shown in Fig.1 includes the computer system 10 and the television system 30. The television system 30 includes VCR for recording selected scheduled programs from a television schedule, a display means for displaying selected programs by the user and remote controller for selecting desired programs from the television schedule for display or recording. If the selected program is for recording, the system will automatically program the VCR to record the program at

the air time (see col.13, line 58 to col.16, line 62; especially, col.16, lines 15-62). It follows, therefore, that in the system of Schein, as shown in Fig.1, for example, the processor controls the set-top box by processing the EPG received through the set-top box and also controls the recorder by automatically programming the VCR to record a user-selected program at the air time.

Furthermore, Yuen teaches the principle that a processor can be located/embedded in a VCR, a cable box (see Yuen col.6, line 57 to col.7, line 14). And Schein has shown that a processor located in the set-top box can control the VCR and the set-top box. It, therefore, would have been obvious that when the microcontroller of the set-top of Schein is located in the VCR, the microprocessor now in the VCR can be used to control the VCR and the set-top box, in order, for example, to satisfy a user's desired design.

### ***Claim Rejections - 35 U.S.C. § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-12,19,22-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schein et al (US 6,002,394) in view of Yuen et al (US 6,430,359).

Regarding claim 1, Schein et al disclose in Fig.1&11 systems and methods for allowing television viewer to retrieve, search, select and interact with television schedule

information located in a remote database, computer network or on-line service, e.g., a network server on the Internet or World Wide Web, comprising:

a) at least one recorder interface connectable to an auxiliary interface connectable to the auxiliary interface (Fig.1 shows where the VCR 36 is connected to the set-top box/computer system 10 through the television system 30, and the computer system 10 may be combined with the television system 30 to form a PCTV to which the VCR 36 is connected; inherently the VCR 36 and the PCTV are connected together through an interface means in the VCR 36 and an interface means in the PCTV, in order for the VCR 36 and the PCTV to communicate efficiently; col.4, lines 52-67; col.6, lines 13-25);

b) a storage device ( see Fig.1 and VCR 36 which inherently includes a storage means; also see Fig.11 and VCR 230 which includes memory 236; col.14, lines 23-27);

c) a microprocessor configured to control the digital video recorder and the set-top box, the microprocessor comprising an electronic program guide subsystem connected to the recorder interface to receive the electronic program guide information from the set-top box (see Fig.1 and processor 16 of STB/computer system 10) and to process the electronic program guide information to schedule recording the broadcast audiovisual data on the storage device ( see col.4, line 52 to col.5, line 37; col.13, lines 33-40; col.15, lines 43-57).

Schein fails to explicitly disclose wherein the micro-processor is explicitly in digital video recorder.

Yuen et al teach video cassette recorder systems, including the timer preprogramming feature of video cassette recorders (VCRs) and an apparatus and method for using encoded information to shorten the time required to perform timer preprogramming , and an apparatus and method of embedding the decoding of the encoded information in a television receiver, VCR, cable box and satellite receiver, comprising video cassette recorder/player 14 with G-code decoder 38 (see Fig.1; and at least col.6, line 57 to col.7, line 14). Yuen further discloses that the G-code decoder comprises micro-controller (micro-processor) 60 (see Fig. 2) . Again Yuen discloses wherein the G-code decoder with its micro-controller is in the remote controllers 80&90 (see Fig.3&4; col.7, line 65 to col.8, line 48); G-code decoder with its micro-controller in a television set (see Fig.32); G-code decoder with its micro-controller in a cable box (see Fig.34); G-code decoder with its micro-controller in a satellite receiver (see Fig.35). It follows that a micro-processor can be added to a variety of electronic devices, including a VCR, for example.

It, therefore, would have been obvious to add the microprocessor to the VCR or the digital video recorder of Schein, in order, for example, to satisfy a design consideration, such as the processor in the VCR running the digital video recorder.

It is pertinent also to note that Schein discloses that the computer 12 can be located in a set-top box, that the computer 10 contains a processor 16, that the computer system 10 with its processor may be combined with the television system 30 to form a PCTV, wherein the processor of the computer may be used to run the program guide and other software. It is also possible to incorporate the computer with

its processor into the television set or incorporate the television into the computer (see col.4, line 52 to col.5, line 15).

It follows from the disclosures of Schein and Yuen that it would have been obvious to one of ordinary skill in the art to incorporate the processor into a variety of electronic devices to run those electronic devices, such as the digital video recorder, in order to satisfy a desired design consideration, for example, control the set-top box.

Regarding claim 2, Schein discloses wherein the electronic program guide subsystem comprises an electronic program guide processor (as discussed in claim 1 above, see Fig.1, computer system/STB 10 and processor 16; col.4, line 67 to col.5, line 15; col.6, lines 51-65).

Regarding claim 3, Schein discloses wherein the electronic program guide subsystem further comprises an electronic program guide manager (as discussed in claim 1 above, see Fig.1, computer system/STB 10 and processor 16; col.4, line 67 to col.5, line 15; col.6, lines 51-65).

Regarding claim 4, Schein discloses wherein the electronic program guide subsystem further comprises an electronic program guide storage buffer to store the electronic program guide information (see col.6, lines 14-25; col.7, lines 16-24).

Regarding claim 5, Schein discloses wherein the electronic program guide subsystem is configured to present processed electronic program guide information to a user (see discussions in claim 1 above.)

Regarding claim 6, Schein discloses wherein the digital video recorder receives the electronic program guide (EPG) information and broadcast audiovisual data from a single source ( see see Fig.1, computer system/STB 10 and processor 16; col.4, line 66 to col.5, line 15; col.13, lines 33-40; col.15, lines 43-57), here the computer system/STB 10 is the single source.

Regarding claim 7, Schein discloses wherein the single source is the set-top box (see claim 6 discussions, and Fig.1, the computer system/STB 10).

Regarding claim 8, Schein discloses wherein the digital video recorder receives the electronic program guide (EPG) information and broadcast audiovisual data from a single interface (see claim 1 discussions), examiner reads the single interface as the VCR 36 interface.

Regarding claim 9, Schein discloses wherein the digital video recorder receives the electronic program guide (EPG) information as a component of one or more channels of the broadcast audiovisual data ( see col.7, lines 16-45).

Regarding claim 10, Schein discloses wherein the electronic program guide (EPG) subsystem is configured to receive updated EPG information from the set-top box, where the set-top box is configured to detect updated EPG information (see col.13, lines 18-26).

Regarding claim 11, Schein discloses wherein the EPG subsystem is configured to receive EPG information selectively transmitted by the set-top box via the auxiliary interface and the recorder interface ( see col.15, lines 43-57).

Regarding claim 12, Schein discloses wherein the EPG subsystem is configured to transmit a request signal to the set-top box, where the set-top box is configured to selectively transmit the EPG information to the EPG subsystem in response to the request signal (see col.13, lines 33-40).

Regarding claim 19, the claimed limitations of claim 19 are accommodated in the discussions of claim 1 above.

Regarding claim 22, the claimed limitations of claim 22 are accommodated in the discussions of claim 1 above, except recognizing the connection of the digital video recorder to the set-top box, which is inherent in the Schein EPG system in order for Schein EPG system to function efficiently, whereby the STB/computer system 10

communicates with the digital video recorder, e.g., (VTR) 36, which facilitates the user recording of desired broadcast programs.

Regarding claim 23, Schein discloses wherein the EPG information and broadcast audiovisual data are transmitted to the set-top box from a single source ( see claim 6 discussions).

Regarding claim 24, Schein discloses wherein the EPG information and broadcast audiovisual data are received by an input interface of the set-top box source ( see claim 1 discussions).

Regarding claim 25, Schein discloses wherein the EPG information is included in the broadcast audiovisual data (see claims 23&24 discussions).

Regarding claim 26, the claimed limitations of claim 26 are accommodated in the discussions of claim 10 above.

Regarding claim 27, the claimed limitations of claim 27 are accommodated in the discussions of claim 11 above.

Regarding claim 28, the claimed limitations of claim 28 are accommodated in the discussions of claim 12 above.

Regarding claim 29, Schein discloses wherein the transmitting of EPG information from the set-top box is performed selectively in response to user input (see col.13, lines 33-40).

Regarding claim 30, the claimed limitations of claim 30 are accommodated in the discussions of claim 4 above.

4. Claims 13,14,16&17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schein in view of Yuen et al and further in view of Wugofski (US 6,003,041).

Regarding claims 13&14, Schein and Yuen fail to disclose wherein the at least one auxiliary interface supports isochronous communication and wherein the at least one auxiliary interface supports isochronous communication. Wugofski teaches the selection, and presentation of media signals from multiple channels of multiple sources to a multimedia system comprising VCR, connection box/STB, RF TV, and where conventional control functions for these devices may be achieved by wired interfaces such as those described in the IEEE-1394 standard (see col.2, line 66 to col.3, line 28). It is well known by one of ordinary skill that IEEE-1394 interface supports isochronous communication. It would have been obvious to further modify Schein by connecting the electronic devices (VCR, STB, TV) of the EPG system through the IEEE-1394 interface, since the IEEE-1394 interface supports isochronous and asynchronous communication

Regarding claim 16, the claimed limitations of claim 16 are accommodated in the discussions of claim 13 above.

Regarding claim 17, the claimed limitations of claim 17 are accommodated in the discussions of claim 14 above.

5. Claims 15&18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schein in view of Yuen et al and further in view of Jackson (US 5,963,264).

Regarding claim 15, Schein and Yuen fail to explicitly disclose wherein the at least one auxiliary interface supports synchronous communication.

Jackson teaches in Fig.1 a method and apparatus for controlling all models of VCRs via infrared signals by providing the infrared codes necessary to operate each particular brand and model VCR and real time program scheduling information in the data stream comprising VCR device 38, packet synchronization module 24 and the program clock reference that keeps the local clock synchronized with the clock at the uplink center (see col.3, line 51 to col.4, line 35).

It would have been obvious to further modify Schein by applying the synchronous processing principle of Jackson to Schein in order, for example, to synchronize the corresponding audio and video signals of Schein, and it would have been obvious that the recorder would record the synchronized audio and video signals received through the recorder interface, thereby supporting synchronous communication.

Regarding claim 18, the claimed limitations of claim 18 are accommodated in the discussions of claim 15 above.

6. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schein in view of Yuen and further in view of Lawler et al (US 5,699,107).

Regarding claim 21, Schein and Yuen fail to disclose wherein the digital video recorder comprises a user viewing monitor that keeps track of and compiles a user viewing history and set of user preferences.

Lawler et al teach in Fig.1 a system for informing a user of an interactive viewing system that a selected program is available for viewing and a system for allowing a user to select a future program for later reminding comprising local area network (LAN) 24 that includes multiple computer servers 26 for performing various interactive system applications or functions. The servers 26 which store and process information at the headend, may include, for example, service and application servers (SAS) 30, continuous media servers 32 and electronic program guide data servers 34. The service and application servers 30 processes interactive service requests from subscribers and provides services and applications associated with, for example, network monitoring functions. The service and application servers 30 may also contain a subscriber database. The subscriber database may store subscriber specific information such as each user's identity, a login code which identifies different users, a user's viewing preferences and history. The various functions of the servers 26 may be combined so as to be carried out by a single server (see col.4, line 27 to col.5, line 12).

Providing a viewing monitoring means that keeps track of user viewing history and set of user preferences provides the desirable advantage of making available to a service provider the mechanism to track what type of programs viewers watch more often so that the service provider could then target such viewers with such similar programs.

It would have been obvious to further modify Schein by realizing Schein with a viewing monitoring means that keeps track of user viewing history and set of user preferences, since providing a viewing monitoring means that keeps track of user viewing history and set of user preferences provides the desirable advantage of making available to a service provider the mechanism to track what type of programs viewers watch more often so that the service provider could then target such viewers with such similar programs.

#### Note

7. In view of the fact that examiner Boccio inadvertently agreed with the applicant during the interview of 5/11/04, this Office Action is NOT made Final

#### *Conclusion*

8. Any inquiry concerning this communication or earlier communications from this examiner should be directed to Christopher Onuaku whose telephone number is (703) 308-7555. The examiner can normally be reached on Tuesday to Thursday from 7:30 am to 5:00 pm. The examiner can also be reached on alternate Monday.

If attempts to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Andrew Faile, can be reached on (703) 305-4725.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(703) 872-9314, (for formal communications intended for entry)

and (for informal or draft communications, please label "PROPOSED" or  
"DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should  
be directed to Customer Service whose telephone number is (703) 306-0377.

*COO*  
COO

12/11/04  
*TP*

*[Signature]*  
THAI TRAN  
PRIMARY EXAMINER